

The Invention Claimed Is:

1. A method for insulating interior walls of lamination slots of dynamo-electric machine components by controlling displacement and speed profiles of a plurality of mechanical output members comprising:

moving at least one member located within a casing;

translating the plurality of mechanical output members by the moving of the at least one member; and

extending the plurality of mechanical output members at least in part from the casing.

2. The method defined in claim 1, further comprising:

moving a first mechanical output member that is coupled to a cutting member at least partially outside the casing;

moving a second mechanical output member that is coupled to a forming member at least partially outside the casing; and

moving a third mechanical output member that is coupled to an inserting member at least partially outside the casing.

3. The method defined in claim 1, wherein the extending the plurality of mechanical output members occurs from the top of the casing.

4. The method defined in claim 1, wherein the moving of the members is comprised of rotating a shaft with a plurality of cams coupled to a longitudinal axis of the shaft.

5. The method defined in claim 4, wherein the rotating of the shaft with the plurality of cams moves the output members.

6. The method defined in claim 4, further comprising controlling the moving of the output members by sufficiently contacting the plurality of cams with a roller coupled to at least one arm of a yoke.

7. The method defined in claim 6, further comprising minimizing the play between the rollers and the first plurality of cams.

8. A method for insulating interior walls of lamination slots of dynamo-electric machine components comprising:

cutting a strip of insulation material into a segment having a predetermined length;

forming the cut segment of insulation material into a predetermined shape;

inserting the formed segment of insulation material into the lamination slot; and

controlling the cutting, forming, and inserting with a central control device having a single shaft and a plurality of cams coupled to a longitudinal axis of the shaft.

9. The method defined in claim 8, wherein the cutting comprises moving a cutting member.

10. The method defined in claim 8, wherein the forming comprises moving of a forming member.

11. The method defined in claim 8, wherein the inserting comprises moving of an inserting member.

12. The method defined in claim 8, wherein:  
the controlling of the cutting is  
performed by a first plurality of cams;  
the controlling of the forming is  
performed by a second plurality of cams; and  
the controlling of the inserting is  
performed by third plurality of cams.

13. The method defined in claim 12, wherein  
the controlling the cutting further comprises  
sufficiently contacting each cam of the first plurality  
of cams with a roller coupled to at least one arm of a  
first yoke.

14. The method defined in claim 13, wherein  
the sufficiently contacting comprises minimizing the play  
between the rollers and the first plurality of cams.

15. The method defined in claim 12, wherein  
the controlling the forming further comprises  
sufficiently contacting each cam of the second plurality  
of cams with a roller coupled to at least one arm of a  
second yoke.

16. The method defined in claim 15, wherein  
the sufficiently contacting comprises minimizing the play  
between the rollers and the second plurality of cams.

17. The method defined in claim 12, wherein  
the controlling the inserting further comprises  
sufficiently contacting each cam of the third plurality

of cams with a roller coupled to at least one arm of a third yoke.

18. The method defined in claim 17, wherein the sufficiently contacting comprises minimizing the play between the rollers and the third plurality of cams.

19. The method defined in claim 8, wherein the controlling is centrally driven by rotating the shaft.

20. The method defined in claim 19, further comprising transforming the rotation of the shaft to translate a cutting member to perform the cutting.

21. The method defined in claim 20, wherein the translation of the cutting member is periodic.

22. The method defined in claim 19, further comprising transforming the rotation of the shaft to translate a forming member to perform the forming.

23. The method defined in claim 22, wherein the translation of the forming member is periodic.

24. The method defined in claim 19, further comprising transforming the rotation of the main shaft to translate an inserting member to perform the inserting.

25. The method defined in claim 24, wherein the translation of the inserting member is periodic.

26. The method defined in claim 8, further comprising advancing to a state in preparation for insulating a next slot.

27. An apparatus for insulating interior walls of lamination slots of dynamo-electric machine components by controlling displacement and speed profiles of a plurality of mechanical output members comprising:

a casing;

a plurality of mechanical output members extending at least partially outward from the casing; and  
movable members located within the casing that translate the plurality of mechanical output members at least partially outward from the casing.

28. The apparatus defined in claim 27, further comprising:

a cutting member outside the casing that is coupled to a first output member;

a forming member outside the casing that is coupled to a second output member; and

an inserting member coupled outside the casing that is coupled to a third output member.

29. The apparatus defined in claim 27, wherein the plurality of output members extend outward from the top of the casing.

30. The apparatus defined in claim 27, wherein the movable members are comprised of a shaft with a plurality of cams coupled to a longitudinal axis of the shaft.

31. The apparatus defined in claim 30, wherein the plurality of cams are coupled to the output members.

32. The apparatus defined in claim 30, wherein

each cam of the plurality of cams is sufficiently contacted by a roller coupled to at least one arm of a first yoke.

33. The apparatus defined in claim 32, wherein play between the rollers and the first plurality of cams is minimized.

34. An apparatus for insulating interior walls of lamination slots of dynamo-electric machine components comprising:

a cutting member for cutting a strip of insulation material into a segment having a predetermined length;

a forming member for forming the cut segment of insulation material into a predetermined shape;

an inserting member for inserting the formed segment of insulation material into the lamination slot; and

a central control device comprising a single shaft and a plurality of cams coupled to a longitudinal axis of the shaft for controlling the cutting member, forming member, and inserting member.

35. The apparatus defined in claim 34, wherein the cutting member is driven by the central control device.

36. The apparatus defined in claim 34, wherein the forming member is driven by the central control device.

37. The apparatus defined in claim 34, wherein the inserting member is driven by the central control

RECORDED - OREGON

device.

38. The apparatus defined in claim 34,  
wherein:

a first plurality of cams controls the  
cutting member;

a second plurality of cams controls the  
forming member; and

third plurality of cams controls the  
inserting member.

39. The apparatus defined in claim 38, wherein  
each cam of the first plurality of cams is sufficiently  
contacted by a roller coupled to at least one arm of a  
first yoke.

40. The apparatus defined in claim 39, wherein  
play between the rollers and the first plurality of cams  
is minimized.

41. The apparatus defined in claim 38, wherein  
each cam of the second plurality of cams is sufficiently  
contacted by a roller coupled to at least one arm of a  
second yoke.

42. The apparatus defined in claim 41, wherein  
play between the rollers and the second plurality of cams  
is minimized.

43. The apparatus defined in claim 38, wherein  
each cam of the third plurality of cams is sufficiently  
contacted by a roller coupled to at least one arm of a  
third yoke.

44. The apparatus defined in claim 43, wherein play between the rollers and the third plurality of cams is minimized.

45. The apparatus defined in claim 34, wherein the central control device is enclosed by a casing.

46. The apparatus defined in claim 34, wherein the central control device is a drive mechanism that rotates the shaft.

47. The apparatus defined in claim 46, wherein the cams on the shaft rotate to translate the cutting member to perform the cutting.

48. The apparatus defined in claim 47, wherein the translation of the cutting member is periodic.

49. The apparatus defined in claim 46, wherein the cams on the shaft rotate to translate the forming member to perform the forming.

50. The apparatus defined in claim 49, wherein the translation of the forming member is periodic.

51. The apparatus defined in claim 46, wherein the cams on the shaft rotate to translate the inserting member to perform the inserting.

52. The apparatus defined in claim 49, wherein the translation of the inserting member is periodic.